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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,954	12/07/2000	Michael Wray	B-4053 618409-8	2785

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EXAMINER

NALVEN, ANDREW L

ART UNIT PAPER NUMBER

2134

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/732,954

Applicant(s)

WRAY, MICHAEL

Examiner

Andrew L Nalven

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. Claims 1-12 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 5, 9, 11, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The designated claims provide uncertainties by failing to be clear and unambiguous (see MPEP § 2171) due to the narrative nature of the claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Oorschot et al US Patent No 6,134,550 in view of The Book of Applied Cryptography by Menezes et al.

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6. With regards to claim 1 (as best understood), Van Oorschot teaches the setting as a primary goal to be proved an attribute delegation from a known trusted issuer to a subject (Van Oorschot, column 12 lines 6-7, column 5 lines 15-25, column 8 lines 43-48) and the determining that a trust chain has been found by producing a chain of sub-goals proved by corresponding certificates (Van Oorschot, column 12 lines 14-18) that grounds in a sub-goal justified by a justified attribute delegation that has as issuer the known trusted issuer included in the primary goal (Van Oorschot, column 12 lines 8-25). Van Oorschot fails to teach the seeking of a backwards proof of the primary goal by recursively taking the goal to be proved and decomposing it into subgoals. Van Oorschot fails to teach the seeking of a backwards proof. Menezes teaches the seeking of a backwards proof of the primary goal by a process of recursively taking a goal to be proved, starting with the primary goal, decomposing it into subgoals one of which corresponds to an attribute delegation that is justified by an available certificate and has the same subject as the goal being decomposed, inability to decompose a subgoal that has not been proved causing the process to backtrack to a previous subgoal to seek a new decomposition (Menezes, Page 575, Section 13.6.2 Part 4, Page 572-573 Section 13.6.2 Part 1). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Menezes' method of using backtracking proofs because it offers the advantage of removing the need for a central trusted authority by providing a distributed trust model where any certificate authority may cross-certify any other (Menezes, Page 575, Section 13.6.2 Part 4).

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7. With regards to claim 2, Van Oorschot as modified teaches that the known trusted issuer included in the primary goal is a specifically identified entity that is inherently trusted by the discovery method at least in relation to the required attribute (Van Oorschot, column 4 lines 52-55) and that the justified attribute delegation is an attribute delegation that is justified by a corresponding certificate (Van Oorschot, column 12 lines 5-13).
8. With regards to claim 3, Van Oorschot as modified teaches that the known trusted issuer included in the primary goal is the discovery method itself and the justified attribute delegation is an attribute delegation that is justified either by an axiom inherently trusted by the discovery method or by a corresponding certificate (Van Oorschot, column 11 lines 50-55).
9. With regards to claim 4, Van Oorschot as modified teaches the discovery method as the known trusted issuer being represented in the primary goal and the axiom as a null issuer (Van Oorschot, column 11 lines 50-55 and lines 8-23).
10. With regards to claim 5 (as best understood), Van Oorschot as modified teaches that name mappings justified by corresponding certificates are permitted in a trust chain in addition to attribute delegations, step (b) involving decomposing a particular subgoal to be proved into a name mapping justified by an available certificate and a new subgoal corresponding to the particular subgoal but with the subject reverse mapped using the name mapping (Menezes, Page 575, Section 13.6.2 Part 4).
11. With regards to claim 6, Van Oorschot as modified teaches the maintaining of a list of subgoals already pursued, checking each new subgoal against the list,

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terminating the process of step (b) in failure in the event a new subgoal is already in the list (Van Oorschot, column 7 lines 17-34, column 10 lines 55-58, Menezes, Page 575, Section 13.6.2 Part 4).

12. With regards to claim 7, Van Oorschot as modified teaches the certificates having validity data and the forward traversing of the trust chain to determine the validity of the overall attribute delegation represented by the chain (Van Oorschot, column 11 line 61 – column 12 line 5).

13. With regards to claim 8, Van Oorschot as modified teaches the storing of the state of the process prior to checking the validity of the trust chain found such that the state could be used to continue the process should the check of the validity fail (Van Oorschot, column 12 lines 14-18).

14. With regards to claim 9, Van Oorschot as modified teaches that the attribute-delegation certificate used to prove the subgoal has a subject-directed condition associated with it requiring that a specific subject must have a particular attribute in order for the delegation to be valid and this condition is a further subgoal to be proved (Van Oorschot, column 4 lines 52-62).

15. With regards to claim 10, Van Oorschot as modified teaches the process of step (b) running to completion to find all trust chains, if any, proving the primary goal (Van Oorschot, column 10 lines 35-55, column 12 lines 14-18).

16. With regards to claim 11 (as best understood), Van Oorschot as modified teaches the selecting of certificates to be sent to a resource that requires proof that a

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subject has a particular attribute before allowing use of the resource (Van Oorschot, column 12 lines 20-40).

17. With regards to claim 12 (as best understood), Van Oorschot as modified teaches the determining that the use of the resource is permitted if a trust chain can be found (Van Oorschot, column 10 lines 35-58, column 12 lines 6-11).

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

19. Fischer US Patent No. 5,005,200 and US Patent No. 4,868,877 disclose a public key/signature cryptosystem with enhanced digital signature certification

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L Nalven whose telephone number is 703 305 8407. The examiner can normally be reached on Monday - Thursday 8-6, Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on 703 308 4789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew Nalven

AN

Matthew D. Smithers
MATTHEW SMITHERS
PRIMARY EXAMINER
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